

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: April 2, 1997

Date Received: March 19, 1997

Project: Metro Grab, PO #M56595

Date Samples Extracted: March 31, 1997

Date Extracts Analyzed: March 31, 1997

**RESULTS FROM THE ANALYSIS OF THE WATER SAMPLE
FOR CHROMIUM, COPPER, NICKEL, AND ZINC
USING METHOD 6010**

Samples Processed Using Method 3005A

Results Reported as mg/L (ppm)

<u>Sample ID</u>	<u>Chromium</u>	<u>Copper</u>	<u>Nickel</u>	<u>Zinc</u>
M56595	0.61	0.58	0.68	0.07
Method Blank	<0.05	<0.05	<0.05	<0.05

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QUALITY ASSURANCE RESULTS FOR TOTAL METALS BY INDUCTIVELY COUPLED PLASMA (ICP) (METHOD 6010)

Laboratory Code: 76752 (Duplicate)

Analyte:	Reporting Units	Sample Result	Duplicate Result	Relative Percent Difference	Acceptance Criteria
Chromium	mg/L (ppm)	0.61	0.63	3	0-20
Copper	mg/L (ppm)	0.58	0.58	0	0-20
Nickel	mg/L (ppm)	0.68	0.68	0	0-20
Zinc	mg/L (ppm)	0.07	0.07	0 a	0-20

Laboratory Code: 76752 (Matrix Spike)

Analyte:	Reporting Units	Spike Level	Sample Result	% Recovery MS MSD		Acceptance Criteria	Relative Percent Difference
Chromium	mg/L (ppm)	5	0.61	95	95	80-120	0
Copper	mg/L (ppm)	5	0.58	93	93	80-120	0
Nickel	mg/L (ppm)	10	0.68	97	97	80-120	0
Zinc	mg/L (ppm)	5	0.07	96	97	80-120	1

Laboratory Code: Spike Blank

Analyte:	Reporting Units	Spike Level	% Recovery MS MSD		Acceptance Criteria	Relative Percent Difference
Chromium	mg/L (ppm)	5	99	100	80-120	1
Copper	mg/L (ppm)	5	97	97	80-120	1
Nickel	mg/L (ppm)	10	102	104	80-120	2
Zinc	mg/L (ppm)	5	101	103	80-120	2

a - The analyte was detected at a level less than five times the detection limit. The RPD results may not provide reliable information on the variability of the analysis.

1:20

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

James E. Bruya, Ph.D.
Beth M. Albertson, M.S.
Bradley T. Benson
Kelley D. Wilt

3012 16th Avenue West
Seattle, WA 98119-2029
TEL: (206) 285-8282
FAX: (206) 283-5044

April 2, 1997

**INVOICE # 97ACU0402-1
DUPLICATE COPY**

Accounts Payable
Alaskan Copper Works
628 South Hanford St.
Seattle, WA 98134

RE: Project Metro Grab, PO #M56595: Results of testing requested by Gerry Thompson, Project Manager for material submitted on March 19, 1997.

1 water sample analyzed for
Chromium, Copper, Nickel, and Zinc
using Method 6010 @ \$65 per sample

\$ 65.00

Amount Due

\$ 65.00

FEDERAL TAX ID #(b) (6)

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April 2, 1997

Gerry Thompson, Project Manager
Alaskan Copper Works
628 South Hanford St.
Seattle, WA 98134

Dear Mr. Thompson:

Included are the results from the testing of material submitted on March 19, 1997 from your Metro Grab, PO #M56595 project.

We appreciate this opportunity to be of service to you and hope you will call if you should have any questions.

Sincerely,

FRIEDMAN & BRUYA, INC.

A handwritten signature in black ink, appearing to read 'Kurt Johnson', with a stylized flourish at the end.

Kurt Johnson
Chemist

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Enclosures
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